

listing of claims which begins on page 2 of this paper.

Amendments to the Drawings: None- new drawings are enclosed.

Remarks are at page 10.

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application: **No prior versions.**

LISTING OF CLAIMS:

1.(currently amended): An electronic ballast to regulate power to a load, comprising:

A. an integrated circuit (IC) having a driving terminal, the integrated circuit being adapted to generate a train of high-frequency drive pulses at said driving terminal; a feedback terminal and an internal

reference voltage; the integrated circuit being adapted to compare a feedback signal received at its feedback terminal with the reference voltage and to adjust the duration of said drive pulses via the input according to said comparison; ~~(PRM, PFM, Delta or other modulation schemes could be employed)~~

B. a polarity-reversing bridge connected between the drive terminals and the load, the bridge being driven by separate drive signals and generated by a pair of integrated circuits and providing low-frequency polarity-reversal of the load;

C. a feedback system connected to the feedback terminal and to the load, the feedback system deriving an average feedback signal from current consumed by the load combined with a voltage feedback signal from voltage impressed on the load, the ~~The~~ feedback system combines, by addition, the current and voltage feedback signals to provide said composite feedback signal to the feedback terminal.

2. (previously presented): An electronic ballast as in Claim 1, which ballast further comprises a switch-controlled inductor connected

between the load and a source of regulated DC power; wherein the current feedback signal is derived from current through the inductor.

3.(previously presented): An electronic ballast as in Claim 1 and the

ballast further including a voltage divider having two

opposite ends, which voltage divider establishes a ratio of load voltage feedback added to current feedback.

4. (previously presented): An electronic ballast, as in Claim 1, and the ballast further including a starter means connected to the bridge and to the load to start ignition of an arc.

5. (currently amended): An electronic ballast, as in Claim 1, wherein the bridge comprises four metal oxide field/effect transistors (MOSFETS) .

6. (currently amended): An electronic ballast, as in Claim 1, wherein the load is a high pressure sodium (BPS) lamp .

7. (currently amended): An electronic ballast, as in Claim 1, wherein the load is a square wave waveform and the bridge generates a symmetric current waveform.:

8. (currently amended): The method of operation of an electronic ballast to regulate power to a load, comprising:

A. the ballast incorporating an integrated circuit (IC) having a driving terminal, the integrated circuit being adapted to generate a train of high-frequency drive pulses at said driving terminal; a feedback terminal and an internal reference voltage; the integrated circuit comparing a composite feedback signal received at its feedback terminal with the reference voltage and to adjusting the drive pulses according to minimize the error of said comparison;

B. the ballast further containing a bridge connected between the drive terminal and the load, the bridge being driven by "drive"-signals and generating symmetric polarity-reversal power to the load;

C. the ballast further comprising a feedback system connected to the feedback terminal and to the load, the feedback system deriving an average current feedback signal from current consumed by the load and deriving a voltage feedback signal from voltage consumed by the load; the feedback system combining, by addition, the current and voltage feedback signals and providing said composite feedback signal to the feedback

terminal. ~~This voltage plus current feedback technique is obviously applicable to non-lamp loads, such as motors.~~

9. (previously presented): The method of operating an electronic ballast, as in Claim 8, which ballast further comprises a switched inductor

connected to the load and a source of regulated DC power switch connected to the inductor; wherein the current feedback signal is derived from the average current through the inductor.

10. (currently amended): The method of operating an electronic ballast, as in Claim 8, and the ballast further including a voltage divider having two opposite ends, which voltage divider establishes a ratio of voltage feedback to current feedback; and a current resistor connected to the load to sense current consumed by the load. ⁂

11. (previously presented): The method of operation an electronic ballast, as in Claim 8, and the ballast further including a starter means connected to the bridge and to the load to start ignition of an arc.

12. (previously presented): The method of operation of an electronic

ballast, as in Claim 8, wherein the bridge comprises four metal oxide field/effect transistors (MOSFETS).

13. (currently amended): The method of operation of an electronic ballast, as in Claim 8, wherein the load is a high pressure sodium (BPS) lamp, high intensity discharge lamp (HID) ~~or other non-resistive load.~~

14. (previously presented): The method of operation of an electronic ballast, as in claim 8, wherein the drive current is a square wave waveform and the bridge generates a symmetric current waveform.

15.(previously presented): An electronic ballast to regulate power to a load, comprising:

A. an integrated circuit (IC) means having a driving terminal to generate a train of drive pulses at said driving terminal; a feedback terminal and an internal reference voltage; the integrated circuit means to compare a feedback signal received at its feedback terminal with the reference voltage and to adjust the drive pulses to minimize the error of said comparison;

B. a bridge means connected to the drive terminal and to the load,
the bridge being driven by separate drive signals to generate
low-frequency polarity-reversal of the load;

C. a feedback system means connected to the feedback terminal and
to the load, the feedback system means to derive an average
current feedback signal from current consumed by the load and to
derive a voltage feedback signal from voltage applied to the load;
the feedback system combining, by addition, the current and
voltage feedback signals to provide said composite feedback
signal to the feedback terminal.

16. (previously presented): An electronic ballast, as in Claim 15, which
ballast further comprises a switched inductor connected to the load and a
source of regulated DC power switch connected to the inductor wherein the
current feedback signal is derived from current through the inductor.

17. (currently amended): An electronic ballast, as in Claim 15, and the
ballast further including a voltage divider having two opposite ends,
which voltage divider establishes a ratio of voltage feedback to current
feedback.

18.(previously presented): An electronic ballast, as in Claim 15, and the ballast further including a starter means connected to the bridge means and to the load to start ignition of an arc.

19. (currently amended): An electronic ballast, as in Claim 15, wherein the bridge comprises four metal oxide field / effect transistors (MOSFETS) .

20. An electronic ballast, as in Claim 15, wherein the load is a high pressure sodium (HPS) lamp, high intensity discharge (HID lamp). ~~or other non-resistive load.~~

21. (previously presented): An electronic ballast, as in Claim 15, wherein the load current is a square wave waveform and the bridge means generates a symmetric current waveform.